REMARKS

Claims 8, 13-20, and 23-35 remain in the case. Claims 14-19 and 24-35 are withdrawn.

Claims 8, 13, 23 stand provisionally rejected over copending application no. 10/013,018 under the judicially created doctrine of obviousness-type double patenting. Rather than prolong the prosecution of the current application arguing the merits of these provisional rejections, especially in view of the short time difference between the filing dates of the two applications, a Terminal Disclaimer has enclosed herewith to overcome the provisional rejections, without making any admissions as to the merits of the provisional rejections.

In view of the Examiner's interpretation of claim 13 explained in the current Office Action, claim 13 has been amended to overcome the rejection as unpatentable over Waldorf 4,688,394 in view of Martins et al. 6,502,305 by characterizing the gas cooler as comprising a heat exchanger having "a plurality of spaced rows of flattened tubes from front to back receiving said refrigerant and defining aligned tube runs in each row." Waldorf and Martins et al. fail to disclose or suggest such structure. Rather, both references disclose heat exchangers wherein refrigerant flows through only a single row of tubes from front to back (heat exchange module 15 in Waldorf and 2 in Martins et al.), and engine coolant flow through only a single row of tubes from front to back (heat exchange module 26 in Waldorf and 1 in Martins et al.). Thus, both references teach that a working fluid, whether refrigerant or engine coolant, should flow through a single row of tubes from front to back rather than the plurality of rows of tubes from front to back as recited in claim 13. In view of this amendment, Applicant's respectfully traverse the rejection of claims 13 and 20 as

unpatentable over Waldorf 4,688,394 in view of Martins et al. and request the rejection be withdrawn.

Applicants respectfully traverse all of the §103 rejections based on Hoshino et al. 5,531,268 because all of the rejections involve a hindsight inspired modification to Hoshino et al. by adding fins that would extend across both of the parallel legs (2, 3) of Hoshino et al. These rejections include the rejection of claims 8, 13, 20 and 23 as unpatentable over Hoshino et al. in view of Stoynoff et al. US 2003/0075307A1, and the rejection of claims 8, 13, 20, and 23 as unpatentable Hoshino et al. in view of Martins et al. 6,502,305. These rejections are improper for a number of independent reasons as discussed more fully below.

First, the stated rationale presented in the current rejections continues to rely on a consideration (minimizing heat conduction or transfer) which teaches away from the proposed modifications to Hoshino. This is so despite the fact that the Examiner has acknowledged in the current Office Action that the separated fins of the unmodified Hoshino would "result less thermal conduction than Martins or Stoynoff's fins." This acknowledgment by the Examiner is completely contrary to the continued express reliance in the stated rejections on the rational of minimizing heat conduction or transfer as a basis for the desirability of the proposed modification.

More specifically, in the current rejections, it is asserted that "the purpose of minimizing heat conduction" or "to minimize the heat transfer" is of such importance that one skilled in the art would modify Hoshino et al. in making each of the proposed modifications in the rejections. In Applicants' Amendment B filed May 10, 2004 it was pointed out that the proposed modifications would result in greater heat conduction in comparison to the separate fins 11 and 12 already disclosed for use in Hoshino et al. and that accordingly this rationale was not only

unsupportable, but actually taught directly against the proposed modification. Indeed, one skilled in the art concerned with minimizing heat conduction would retain the structure disclosed in Hoshino et al. rather than substitute any of the fins that extend across both the parallel legs 2 and 3 of Hoshino et al. as proposed in the rejections. In the current Office Action the Examiner acknowledges the correctness of the basis for these arguments by stating that "the examiner agrees with the applicant that in aspect of the thermal conduction, separated fins would result less thermal conduction than Martins or Stoynoff's fins." Despite this acknowledgment by the Examiner, the rejections continue to expressly rely on the "minimizing heat conduction" consideration for support of the proposed modification. This is clearly improper and the rejections should be withdrawn for this reason alone.

After agreeing with the basis of Applicants' arguments that the "minimizing heat conduction" consideration teaches directly away from the proposed modification, the Examiner asserts that "[i]f cost of labor for assembling and handling the heat exchanger weights more in design consideration than the cooling performance, the teachings of Martin and Stoynoff is the best choice to achieve both aspects of the heat exchanger." However, this assertion by the Examiner completely ignores Applicants' arguments presented in Amendment B regarding the "to simplify the manufacture" consideration asserted by the Examiner in the prior rejection and now relied on by the Examiner to overcome the counter consideration of minimizing heat transfer, which the Examiner admits gets worse with the proposed modification.

More specifically, in Amendment B it was specifically argued that the other rationale presented in supporting the proposed modification of Hoshino et al. ("to simplify the manufacture") was unsupported by the disclosure of Hoshino et al. Specifically, it was argued that contrary to the assertion in the rejection, "the substitution of fins that extend across each of the parallel legs 2, 3 of

Hoshino et al would not facilitate assembly because it would prevent the simultaneous bending of the tubes 1 of Hoshino et al . . . , thereby complicating the assembly rather than facilitating the assembly." This argument was neither addressed nor acknowledged in the current Office Action. Applicants' are entitled to have this acknowledged and addressed. This is especially true in light of the Examiner's increased reliance on the "to simplify the manufacture" consideration in support of the rejections. Indeed, by ignoring Applicants' argument, it appears that the current rejections are based on a determined hindsight reconstruction and that the Examiner in making the rejections is ignoring considerations or arguments which do not support the hindsight reconstruction, while minimizing considerations, such as minimizing heat conduction, that teach directly away from the hindsight reconstruction. This is clearly improper. For this additional reason alone, the rejections should be withdrawn and the claims allowed.

Moreover, it is respectfully submitted that the asserted benefit of simplifying the manufacture can not be supported on any factual basis because there is nothing in Hoshino et al. or any of the other references to indicate that the asserted benefit of the proposed modification would somehow overcome the **express** assembly benefit identified in Hoshino et al., which is the ability to simultaneously bend all of the tubes of Hoshino et al. thereby realizing a higher productivity. *See* Hoshino et al., col. 6, lns. 37-39. This simultaneous bending is the focus of every embodiment of Hoshino et al. and cannot be accomplished in the proposed modification because it is fundamentally incompatible with fins that extend across both of the parallel legs 2, 3 of Hoshino et al. There is absolutely no rationale presented in the rejections, or any evidence cited by the Examiner from the references, to support a conclusion that it would be more desirable to sacrifice the simultaneous bending of the tubes of Hoshino et al. so as to achieve the asserted benefit of using fins that extend

across both of the parallel legs. Absent such a rationale and supporting evidence, the rejections fail to establish a *prima facie* case of obviousness under §103 and are improper.

Furthermore, the use of fins that would extend across both of the parallel legs 2, 3 of Hoshino et al. would require greater accuracy in the individual bending of each of the tubes and in the entire construction because the parallel legs 2, 3 of each tube 1 of Hoshino et al. must lie strictly in the same plane in the assembled state so as to accommodate a fin that would extend across both parallel legs 2, 3; something which is not currently required in the construction of Hoshino et al. and can only be viewed as a complication in the assembly, rather than an improvement. This complication is not overcome by the asserted advantage of reducing "the number of separated parts for forming a heat exchanger" as newly stated in the current Office Action. This is so because the proposed modification would more than double the number of bending operations, as each of the tubes must be individually bent rather than simultaneously bent in the single operation of the unmodified Hoshino et al. construction, and because of the increased accuracy required for each of the individually bent tubes of the proposed modification, Thus, as is the case for "minimizing heat conduction", the motivation "to simplify the manufacture" would lead one skilled in the art to maintain the current construction of Hoshino et al. rather than to pursue the modification proposed in the rejections. Accordingly, for these reasons alone, the rejections are improper and should be withdrawn, and the claims should be allowed.

Additionally, even if it could somehow be shown that the proposed modification would "simplify the manufacture" of Hoshino et al., it would have to further be shown that the associated benefit would out weigh the admitted penalty in "minimizing heat conduction" that would

result from the proposed modification. This has not been done in the current Office Action. For this additional reason, the rejections should be withdrawn and the claims allowed.

To the extent that these rejections are maintained in a subsequent Office Action, applicants specifically request that each of the foregoing arguments be specifically addressed and that the Examiner explain how the benefits of the **expressly** preferred manufacturing method shown in Hoshino et al. are outweighed by the addition of fins that extend across both legs 2, 3 of Hoshino et al. and where in the prior art it is taught or suggested that the benefits of the proposed modification outweigh its obvious disadvantages when applied to Hoshino et al.

It is respectfully noted that the current Office Action has clarified that the asserted motivation of making "the heat exchanger more compact" is intended to mean that "the number of separated parts for forming a heat exchanger is significant reduced by using one common fin as taught by Martins or Stoynoff." Thus, the "more compact" assertion appears to be a furtherance of the "simplify the manufacture" assertion and as such has been addressed by Applicants' arguments presented above. Further, in view of this clarification in the current Office Action, it appears that the Examiner is not asserting "compactness" as understood by the Applicants in Amendment B and that such "compactness" is not and has never been a basis of the rejections. Additionally, it is respectfully noted that while the above quoted clarification in the current Office Action mentions Stoynoff, the motivation of "make the heat exchanger more compact" has only been stated in support of the rejection based on Martins et al. and has never been relied on in support of the rejection based on Stoynoff.

Finally with respect to all of the rejections based on Hoshino et al., in responding to Applicants' arguments that the proposed modification would impermissibly change the principle of

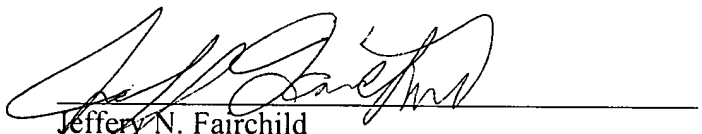
operation of Hoshino et al. and impermissibly render Hoshino et al. unsatisfactory for its intended purpose, the current Office Action asserts that it is the claims of Hoshino et al. rather than the disclosure of Hoshino et al. that should be the focus of an obviousness rejection. However, it is the entire disclosure of a prior art reference which must be considered when making a rejection under §103, not just the claims. See *In re Lancer, Jr.*, 465 F.2d 896, 899 (CCPA 1972) (stating that "[all] of the disclosures in a reference must be evaluated for what they fairly teach one of ordinary skill in the art" and that "when 'all of the disclosures in a reference' are considered, the overall suggestion to emerge from the prior art reference may be contrary to that which might appear from an isolated portion of the reference"). See also, MPEP §2141.02 stating that "A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention." In this case, irregardless of the claims of Hoshino et al., it cannot fairly be argued that the simultaneous bending of all of its tubes, which is featured in every embodiment disclosed in Hoshino et al., isn't of utmost importance. In this respect, the proposed modification is completely contrary to the principles of Hoshino et al. and would render the prior art heat exchanger of Hoshino et al. unsatisfactory for its intended purpose which is to provide a heat exchanger construction that can be folded in half after its fins and tubes are assembled together. The situation presented in this case is very similar to that discussed in *In re Epple*, 477 F.2d 582 (CCPA 1973), wherein the Court overruled a decision by the Board of Appeals based on the Court's determination that the modification proposed to the device of a prior art reference was contrary to the technique of manufacture disclosed in the prior art reference for making the claimed device. See *In re Epple*, 586 (stating that "We too think that one possessed of ordinary skill in the art would not have envisioned the claimed structure from Pomerantz & Heiman, especially in light of the technique of manufacture

disclosed by Pomerantz which differs completely from the method of making the claimed device"). In this case, as in *In re Epple*, the rejections attempt to modify a primary reference contrary to its disclosed technique of manufacture. Accordingly, for these additional reasons alone, the rejections are improper and should be withdrawn.

Withdrawn claims 24-29 depend from base claim 8 which is believed to be allowable and which is generic to all the species identified in the Office Action dated March 21, 2003 (Paper No. 5). Similarly, withdrawn claims 30-35 depend from claim 23, which is generic to all of the species identified in Paper No. 5. Because claims 8 and 23 are respectfully submitted to be allowable, it is believed that withdrawn claims 24-35 should be considered and are allowable.

In view of the foregoing, Applicants respectfully request reconsideration of the rejections of the claims, consideration of withdrawn claims 14-19 and 24-35 in view of the believed allowability of claims 8 and 23, and allowance of the case.

Respectfully submitted,



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